Redvision™

X-SERIES

USER MANUAL

Products Covered:

RV X-SERIES™ PTZ Positioning Camera
RV-PSU Power Supply
RV-ALM16 Alarm Module
RV-ALM16-W Wireless Alarm Module

[RVX 9.2]

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Table of Contents

1 INSTALLING THE CAMERA HEAD

1.1 CONVERT DOME TO BALL PTZ CONFIGURATION
1.2 ATTACHING CAMERA TO BRACKET
1.3 BRACKET TYPES
1.4 HOW TO CANTILEVER BALL/PTZ ARMS FORWARD

2 HOW TO CONFIGURE THE CAMERA

2.1 REMOVING THE DIP SWITCH SCREW COVER
2.1.1 CAMERA ORIENTATION FOR SETTING DIP SWITCHES
2.1.2 DEFAULT DIP SWITCH SETTINGS
2.2 SETTING THE CAMERA ADDRESS
2.3 SETTING THE CAMERA PROTOCOL
2.4 SETTING THE CAMERA BAUD RATE
2.5 SETTING THE CAMERA RS485 TERMINATION
2.6 REAL TIME CLOCK (RTC)
2.7 REPLACING THE DIP SWITCH COVER

3 POWER SUPPLY INSTALLATION

3.1 VOLTAGE
3.2 PSU INTERNAL CONNECTIONS
3.2.1 MAINS INPUT
3.2.2 CONNECTIONS TO CAMERA – 8 WAY BLOCK
3.2.3 CONNECTIONS TO CONTROL – 8 WAY BLOCK
3.2.4 BNC CONNECTIONS

4 ALARM MODULE (RV-ALM16)

4.1 INSTALLATION
4.1.1 SLIDE SWITCH
4.2 CONNECTION IDENTS AND DIP SWITCH LOCATION
4.3 ALARM INPUTS
4.3.1 ALARM INPUT GROUNDS
4.3.2 ALARM RELAY OUTPUT (VOLT FREE)
4.4 NORMALLY OPEN NORMALLY CLOSED ALARM INPUTS
4.5 SETTING THE ALARM MODULE RS485 TERMINATION
4.5.1 TERMINATION SCENARIOS
4.6 SETTING ALARM MODULE PROTOCOL
4.7 SETTING ALARM MODULE BAUD RATE

5 WIRELESS ALARM CARD (WIRELESS PIR DETECTOR)

5.1 FACTORY FITTED WIRELESS CARD (RV-PSU-ALM16-W)
5.2 SLIDE SWITCH
5.2.1 POSITIONING OF RV-PSU-ALM16-W
5.3 IF RETRO FITTING WIRELESS ALARM RECEIVER

6 NAVIGATING THE MENUS

6.1 MENU NAVIGATION - FLOW CHART
6.1.1 ACCESS MAIN MENU FROM 3RD PARTY CONTROLLERS
6.1.2 EXIT MENU
6.2 LOGIN
6.3 LOGIN EXPIRY
6.4 SET UP
6.4.1 ENTER DATE & TIME CLOCK
6.4.2 DAYLIGHT SAVING
6.4.3 LANGUAGE OPTIONS
6.4.4 DISPLAY
6.4.5 PASSWORDS
6.4.6 DATUM CHECK

6.4.7 CAMERA ORIENTATION
6.4.8 DATE AND TIME OF INSTALLATION
6.4.9 CLEAR SETTINGS
6.4.10 DIAGNOSTICS

7 NIGHT MODE
7.1 IR MODE
7.2 ON LEVEL
7.3 OFF LEVEL
7.4 AUTO IR DELAY
7.5 ON TIMES
7.6 INFRA-RED POWER (RVX-IR VERSION ONLY)

8 CAMERA SETTINGS
8.1 DAY SETTINGS
8.1.1 SHUTTER SPEED
8.1.2 EXPOSURE COMPENSATION
8.1.3 JOYSTICK FOCUS MODE
8.1.4 PRESET FOCUS MODE
8.1.5 ADVANCED CONFIGURATION
8.2 NIGHT SETTINGS
8.2.1 COLOUR/MONO
8.2.2 SHUTTER SPEED
8.2.3 EXPOSURE COMPENSATION
8.2.4 JOYSTICK FOCUS MODE
8.2.5 PRESET FOCUS MODE
8.2.6 ADVANCED CONFIGURATION
8.3 VIDEO GAIN
8.4 IRIS KEY USAGE
8.5 VIDEO LIFT
8.6 DIGITAL ZOOM
8.7 INVERT CAMERA IMAGE
8.8 MIRROR CAMERA IMAGE
8.9 CROSS HAIR

9 JOYSTICK& WIPER
9.1 JOYSTICK CURVE
9.2 ZOOM RATIO
9.3 WIPER
9.3.1 WIPER SHORT-CUT PRESET
9.3.2 WASH SHORT-CUT PRESET (NOT AVAILABLE YET).
9.4 JOYSTICK SPEED
9.5 PAN LIMITS
9.5.1 SET RIGHT LIMIT
9.5.2 SET LEFT LIMIT
9.6 SET TILT LIMITS

10 PRESETS & TOURS
10.1 FOCUS SHIFT
10.2 SET A PRESET (USING CAMERA INTERNAL MENU)
10.3 EDIT PRESETS
10.4 PRESET SPEED
10.5 TOURS
10.6 TOUR 1 TO 8
10.6.1 TOUR TITLE (HOW TO PROGRAM)
10.6.2 HOW TO INITIALISE A TOUR
10.6.3 EDIT TOUR

10.6.4 TOUR DWELL TIME
10.6.5 SPEED
10.6.6 TOUR ORDER
10.6.7 FREEZE FRAME DURING SEEK
10.7 RESTORE (PRESET & TOURS)
10.7.1 RESTORE TO TOUR OR PRESET NUMBER
10.7.2 TIMED RESTORE WEEKDAY
10.7.3 TIMED RESTORE WEEKEND
10.7.4 RESTORE MODE
10.7.5 RESTORE DELAY

11 PRIVACY ZONES
11.1 SET/CLEAR MASK
11.2 ZOOM THRESHOLD
11.3 EDIT MASK

12 ALARM HANDLING IN MENU SOFTWARE
12.1 ENABLE /DISABLE ALARMS
12.2 ALARM OVER-RIDE
12.3 ALARM CYCLE TIME
12.4 EDIT ALARMS
12.4.1 ACTIVE TIME WEEKDAYS
12.4.2 ACTIVE TIME WEEKENDS
12.4.3 ACTION WHEN ACTIVE
12.4.4 ACTION NUMBER
12.4.5 ACTION WHEN MASKED
12.4.6 TITLE
12.4.7 NEW ALARM DWELL
12.4.8 SHOW ALARM INFO
12.4.9 CLEAR COUNTERS

13 CONTACT TECHNICAL SUPPORT

14 TECHNICAL SPECIFICATION

15 WARRANTY INFORMATION

NOTES

1 INSTALLING THE CAMERA HEAD

1.1 CONVERT DOME TO BALL PTZ CONFIGURATION

The RVX Series can be mounted as a dome or ball PTZ configuration. To convert the dome to ball PTZ remove the M4 button head screws with 2.5mm allen key provided. See FIG A below.

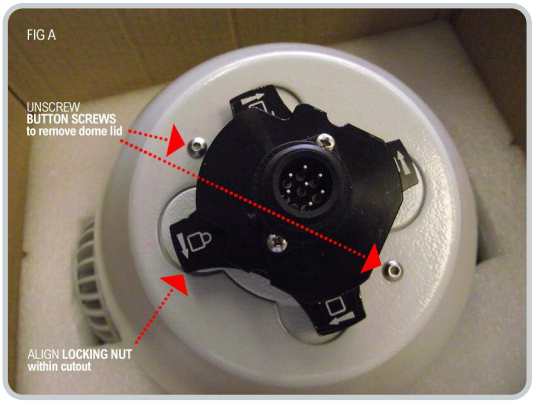


FIG B

OBSERVE THE FOLLOWING PRECAUTIONS WHEN INSTALLING:

1. Mount the Camera in a position where it cannot be be interfered with either intentionally or accidentally.
2. The mounting surface should be capable of supporting the weight of both the Camera and mounting brackets under all expected conditions of load, vibration and temperature.
3. The mounting brackets should be fitted in accordance with instructions and should observe all appropriate safety precautions & local building regulations.
4. Ensure the Camera is in the correct orientation, see FIG B above.

1.2 ATTACHING CAMERA TO BRACKET

BRACKET INSTALLATION:

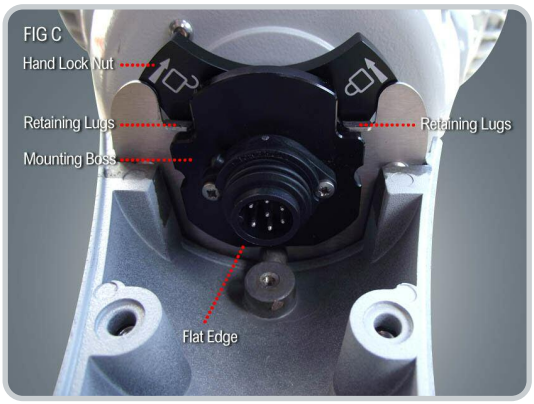
Fixings to the various bracket types will depend on the fixing surface. It is important to use adequate quality fixings to safely support the complete Dome/Ball PTZ assembly. Fixing slots on a 4" PCD provide adequate clearance for 6mm bolts if attaching the Pedestal or Swan Mount to the mast.

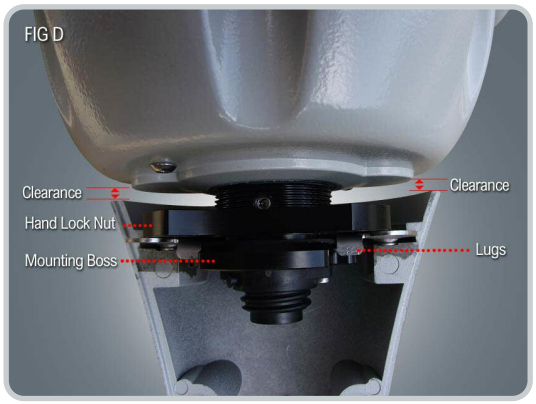
FLYING LEAD:

If using a Swan/Pedestal/Pendant Mount, install the Fly Lead optionally through the Central Mounting Tube or via a 20mm Gland Entry Point. The Gland Entry is supplied with a 20 x 1mm thread to accomodate industry standard 20mm Glands.

ATTACHING CAMERA TO THE BRACKET: See Fig C & D below

1. Remove Mount Cover Plate.
2. Fully unscrew Hand Lock Nut.
3. Offer Camera to Bracket. The Mounting Boss orientation is important and should match the picture in FIG C & D below. i.e The Flat Edge should be positioned to the rear and the Retaining Lugs engaged in the Boss Cut Outs.
4. If RV-PED (Pedestal) is being used support the Camera with hand when tightening the Hand Lock Nut - ensure the Hand Lock Nut is fully tightened.
5. Ensure the Clearance is even throughout 360° rotation and the Camera is free moving.
6. Replace Mount Cover Plates.





1.3 BRACKET TYPES

RV-SWAN (Swan mount), RV-WALL (Wall mount), RV-PNDT (Pendant mount), RV-PED (Pedestal for mast/tower mount).

TECH SUPPORT COMMENT: **It is important to match the menu software settings to the Camera orientation (6.4.7) i.e. is the Camera hanging down or upright?**

'hanging down' would be using one of the following bracket types :

- **swan [RV-SWAN] ,**
- **pendant [RV-PNDT]**
- **or wall [RV-WALL] - NOT SUITABLE FOR UPRIGHT MOUNTING**

'Upright' would be using the pedestal bracket [RV-PED]

1.4 HOW TO CANTILEVER BALL/PTZ ARMS FORWARD

1. Remove pear shaped badge on each arm using small flat head screw driver.
2. Slightly loosen by one turn (BUT DO NOT REMOVE) the allen screws.
3. Cantilever the Ball Arms forward to 'STOP' position.
4. Tighten allen screws.
5. Replace badges (spares are provided).
6. See Section 6.4.7 and from the SET UP MENU select either 'UPRIGHT ARMS OUT' or 'HANGING ARMS OUT'

2 HOW TO CONFIGURE THE CAMERA

2.1 REMOVING THE DIP SWITCH SCREW COVER

There are two rows of DIP switches located behind the large screw cap (see FIG 1 below). Use flat bladed screw driver to remove by turning anti-clockwise to unscrew.

2.1.1 CAMERA ORIENTATION FOR SETTING DIP SWITCHES

CAUTION: **Make sure the dip switches read right way up before configuring Camera. The word 'protocol' should be displayed as per picture see FIG 2 below**

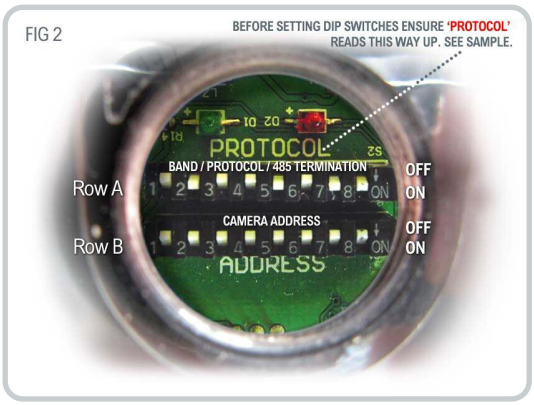
➔ **'ON' is down (away from the word protocol)**
➔ **'OFF' is up (toward the word protocol)**

The switch numbers read 1 to 8 from left to right

THE BAUD & PROTOCOL SWITCHES (ROW A) WORK AS FOLLOWS:

SWITCH 1,2,3	PROTOCOL (SEE 2.3)
SWITCH 4 & 5	BAUD RATE (2.4)
SWITCH 6	NOT USED
SWITCH 7	REAL TIME CLOCK (RTC) BATTERY ENABLE (2.6)
SWITCH 8	RS485 TERMINATION ENABLE (2.5)

Use row B (FIG 2 below) to set the Camera address (2.2)



2.1.2 DEFAULT DIP SWITCH SETTINGS

All X-series™ cameras are factory defaulted to the following configuration:

- BBV Up The Coax (UTC)
- Camera address set to 1
- RS485 termination set to ON
- Real-time clock set to 'ON'

2.2 SETTING THE CAMERA ADDRESS

See table TABLE 1 below for guidance on DIP switch setting for each Camera address. '0' represents OFF (up) and '1' represents ON (down).

TABLE 1

CAMERA ADDRESS	ROW 'B' DIP SWITCH 1	2	3	4	5	6	7	8	CAMERA ADDRESS	ROW 'B' DIP SWITCH 1	2	3	4	5	6	7	8
not used	0	0	0	0	0	0	0	0	16	0	0	0	0	1	0	0	0
1	1	0	0	0	0	0	0	0	17	1	0	0	0	1	0	0	0
2	0	1	0	0	0	0	0	0	18	0	1	0	0	1	0	0	0
3	1	1	0	0	0	0	0	0	19	1	1	0	0	1	0	0	0
4	0	0	1	0	0	0	0	0	20	0	0	1	0	1	0	0	0
5	1	0	1	0	0	0	0	0	21	1	0	1	0	1	0	0	0
6	0	1	1	0	0	0	0	0	22	0	1	1	0	1	0	0	0
7	1	1	1	0	0	0	0	0	23	1	1	1	0	1	0	0	0
8	0	0	0	1	0	0	0	0	24	0	0	0	1	1	0	0	0
9	1	0	0	1	0	0	0	0	25	1	0	0	1	1	0	0	0
10	0	1	0	1	0	0	0	0	26	0	1	0	1	1	0	0	0
11	1	1	0	1	0	0	0	0	27	1	1	0	1	1	0	0	0
12	0	0	1	1	0	0	0	0	28	0	0	1	1	1	0	0	0
13	1	0	1	1	0	0	0	0	29	1	0	1	1	1	0	0	0
14	0	1	1	1	0	0	0	0	30	0	1	1	1	1	0	0	0
15	1	1	1	1	0	0	0	0	31	1	1	1	1	1	0	0	0

See www.redvisioncctv.com/support/downloads for camera address 32 to 255

2.3 SETTING THE CAMERA PROTOCOL

On row 'A' Set DIP switch numbers 1, 2 and 3 (See TABLE 2 below). '1' represents ON (down) and '0 represents OFF (up).

TABLE 2

PROTOCOL	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
BBV Up the Coax	0	0	0					
Pelco P	0	1	0					
Pelco D	1	1	0					
Dennard	1	0	1					
Vista	0	0	1					
Bosch	0	1	1					

2.4 SETTING THE CAMERA BAUD RATE

On row 'A' Use DIP switch numbers 4 and 5 to set the Baud rate. 0=off (up) & 1=ON (down). (See TABLE 3 below).
For Baud Rate settings refer to user manual for the control equipment being used.
NB Pelco D is normally 2400, Pelco P is 4800, Dennard is 9600.

TABLE 3

PROTOCOL	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
9600				0	0			
2400				1	0			
4800				0	1			
19200				1	1			

2.5 SETTING THE CAMERA RS485 TERMINATION

The default position is ON (down).

TABLE 4

TERMINATION	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
OFF								0
ON								1

CAUTION: **Termination switch should be set to ON (down) if:**

- ➔ **The Camera is being run on coax protocol**
- ➔ **The Camera is the only one connected to the twisted pair**
- ➔ **The Camera is last one on a daisy chain**
- ➔ **An alarm module has been fitted to the Camera power supply & is running 485 protocol**

The termination switch should be OFF(up) if:

More than one Camera is connected on a DAISY CHAIN but it is NOT the last in line [The exception would be if an alarm module were installed. If this were the case, the Camera should be terminated (ON/DOWN) and the alarm module would un-terminated (OFF/UP) see section 4.5 Setting the Alarm Module RS485 Termination].

2.6 REAL TIME CLOCK (RTC)

Row A, switch 7 sets the Camera's internal real time clock. The RTC battery should be set to 'on' either at commissioning or installation stage. It should only be set to off if cameras in long term storage (> one month).

The default position is ON (down).

TABLE 5

RTC	ROW 'A' DIP SWITCH 1	2	3	4	5	6	7	8
OFF							0	
ON							1	

2.7 REPLACING THE DIP SWITCH COVER

- Before replacing the DIP switch screw cap, it is important to check it is free of dirt and grit. Thread contamination could affect the waterproof seal.
- The thread should be carefully aligned to prevent burring.
- Using a large flat bladed screw driver turn the screw CLOCKWISE to tighten.

3 POWER SUPPLY INSTALLATION & SETUP

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE POWER SUPPLY UNIT. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

Camera Warranty is void unless it is installed using one of the following Redvision power supplies: Using the wrong type of 3rd party power supply could comprise safety and damage the Camera unit.

- RV-PSU
- RV-PSU-ALM16
- RV-PSU-ALAM16-W

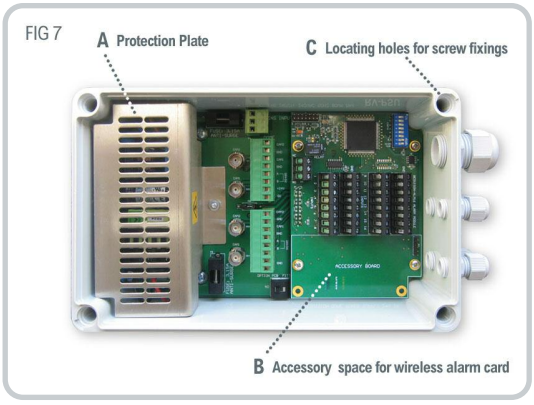
COMPOSITE CABLE: A pre-made composite cable with a 7 way female amphenol connector is supplied with all Redvision brackets. The female connector connects directly to the male connector on the RVX PTZ Camera housing. Follow the colour coding idents as shown in table 3.2.2 for terminating the fly lead in the power supply.

The Redvision power supply (part code: RV-PSU) outputs 24V DC & is supplied in a weather proof ABS box rated IP67.

OBSERVE THE FOLLOWING STEPS WHEN INSTALLING THE REDVISION POWER SUPPLY:

1. Mount the Redvision PSU in a position so it cannot be interfered with intentionally or accidentally. Ideally use a lockable cabinet .
2. Securely fix the Redvision PSU using appropriate size screws and ensure the cable glands have sufficient clearance to allow for the cables to enter, it is important to ensure the glands face DOWNWARDS towards the ground.
3. All cables should be channelled through the appropriate sized gland holes.
4. It is recommended that a good quality screened data pair or coax is used for transmitting data signal.
5. If the Redvision alarm module and or wireless PIR module is to be used refer to section 4 and 5.
6. If Star configuration is used it is recommended a suitable Star Card interface is used.

FIG 7



3.1 VOLTAGE

Input: 110V/230vac 50hz 80va max
Output: 24vdc @ 2A

3.2 PSU INTERNAL CONNECTIONS

3.2.1 MAINS INPUT

TABLE 6

IDENT	MAINS POWER
Live	Live (brown) 110/230Vac 50Hz 1
Neutral	Neutral (Blue)
Earth	Earth (yellow/green)

3.2.2 CONNECTIONS TO CAMERA - 8 WAY TERMINAL BLOCK

TABLE 7

IDENT	UMBILICAL LEAD TO CAMERA
CAM2	Not used
GND	Not used
CAM1	Coax signal
GND	Coax screen
RS485(A)	White
RS485(B)	Orange
+24V	Red
0V	Black and cable screen

3.2.3 CONNECTIONS TO CONTROL - 8 WAY TERMINAL BLOCK

TABLE 8

IDENT	CONTROL CONNECTIONS
*CAM2	Not used
GND	Not used
*CAM1	COAX signal
GND	COAX screen
RS485(A)	RS485(A)
RS485(B)	RS485(B)
Spare	No connection
GND	RS485 screen

3.2.4 BNC CONNECTIONS

TABLE 9

IDENT	BNC CONNECTIONS
*CAM1 (BNC)	DVR Camera input
CAM1 (BNC)	Loop through provided for test monitor

*Video connections can be made either by using the BNC or screw terminal blocks.

4 ALARM MODULE (RV-ALM16)

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE POWER SUPPLY UNIT AND ALARM CARD. THE ALARM CARD SHOULD NOT BE HOT SWAPPED OR INSTALLED WHEN THE POWER IS LIVE AS THIS COULD DAMAGE THE PCB. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

4.1 INSTALLATION

If the alarm module (RV-ALM16) has not been factory fitted refer to separate installation guide supplied with alarm module.

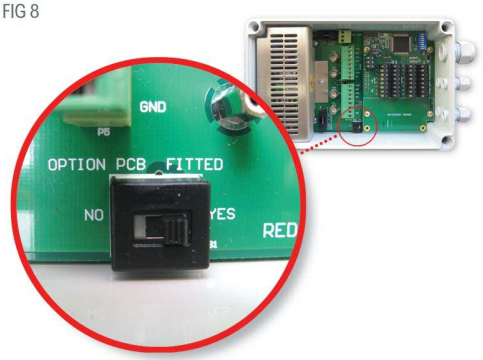
CAUTION: **Alarm module does not support Vista and Dennard protocols. Use Pelco P or D or BBV (UTC).**

4.1.1 SLIDE SWITCH

CAUTION: When an alarm module is fitted to the power supply make sure the slide switch on the power supply is set to 'yes'. Otherwise the alarm activations will not be seen. See FIG 8 below.

Also make sure the alarm module's protocol (see 4.5), termination(see 4.6) & baud rate (4.7), match the PTZ/dome's otherwise the alarms will not work.

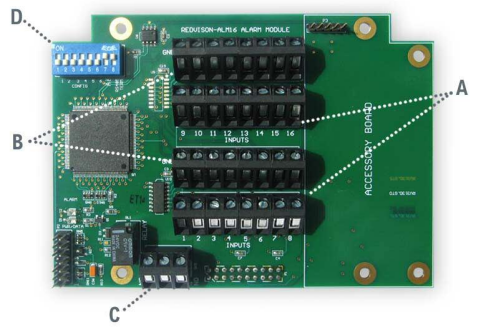
FIG 8



4.2 CONNECTION IDENTS AND DIP SWITCH LOCATION

If the alarm module (RV-ALM16) has not been factory fitted refer to separate installation guide supplied with alarm module.

FIG 9



A	Alarm Inputs 1 to 16
B	Alarm grounds 1to 16
C	Alarm relay output
D	Dip switch settings: Protocol [1-4], baud rate [5-] normally open/closed [7],RS485 Termination [8]

4.3 ALARM INPUTS

See 'A' in FIG 9 above. 1-16 sets of volt free Contacts which can be configured using the onboard 8 way dip switch (see 'D' above) for either normally open or normally closed operation.

4.3.1 ALARM INPUT GROUNDS

See 'B' in FIG 9 above. All alarm input grounds are common & connected together and may be used for outputs of the PIRs or other alarm sources.

4.3.1 ALARM RELAY OUTPUT (VOLT FREE)

Connections from the alarm relay output (see 'C' in FIG 9 above).

TABLE 10

IDENT	ALARM RELAY OUTPUT
NO	Connect to 3rd party control alarm input if normally open signal is required
COM	Connect to 3rd party control alarm input ground
NC	Connect to 3rd party control alarm input if normally closed signal is required

4.4 NORMALLY OPEN NORMALLY CLOSED ALARM INPUTS

Use the onboard 8 way dip switch (see 'D' in FIG 9, page 8) to Select Normally Open NO (1 = ON) or Normally Closed NC (0 = OFF) dependent on whether alarm inputs are connected to sensors with normally open or normally closed outputs. The default position is NORMALLY OPEN (NO) which is 1 ='ON'

8 way dip switch on alarm module (see D in FIG 9, page 8)

TABLE 11

	PROTOCOL				BAUD		NO/NC	RS485 TERM
DIP SWITCH NO.	1	2	3	4	5	6	7	8
Normally OPEN							1	
Normally CLOSED							0	

CAUTION: **if normally closed is selected, all unused alarm inputs must be linked to ground to prevent alarms being continuously generated**

4.5 SETTING THE ALARM MODULE RS485 TERMINATION

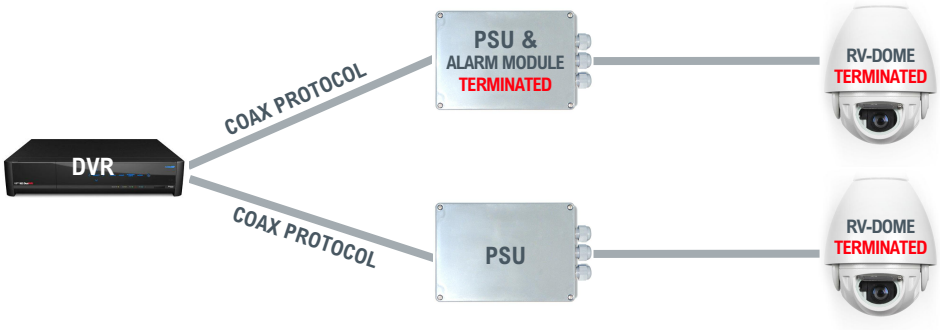
Use the 8 way dip switch (see 'D' in FIG 9, page 8) to set the RS485 termination. The default position is ON=1 (UP). OFF =0 (down).

TABLE 12

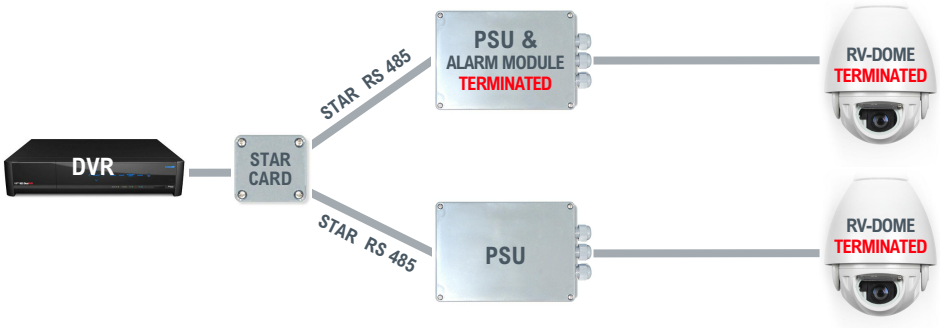
	PROTOCOL				BAUD		NO/NC	RS485 TERM
DIP SWITCH NO.	1	2	3	4	5	6	7	8
ON								1
OFF								0

4.5.1 TERMINATION SCENARIOS

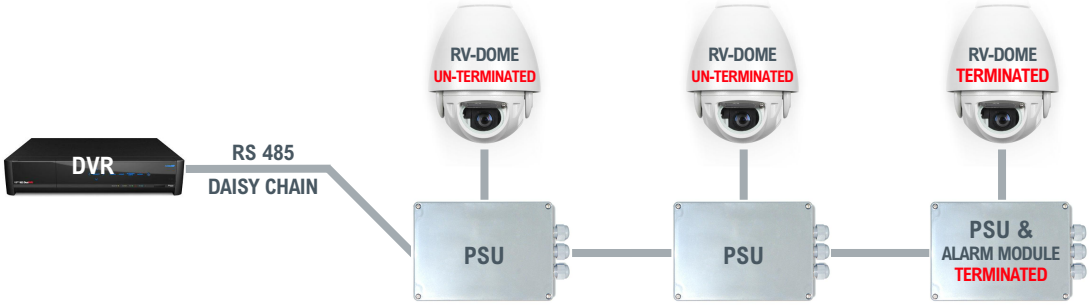
If control is over coax protocol, both the Camera and Alarm Module should be terminated.



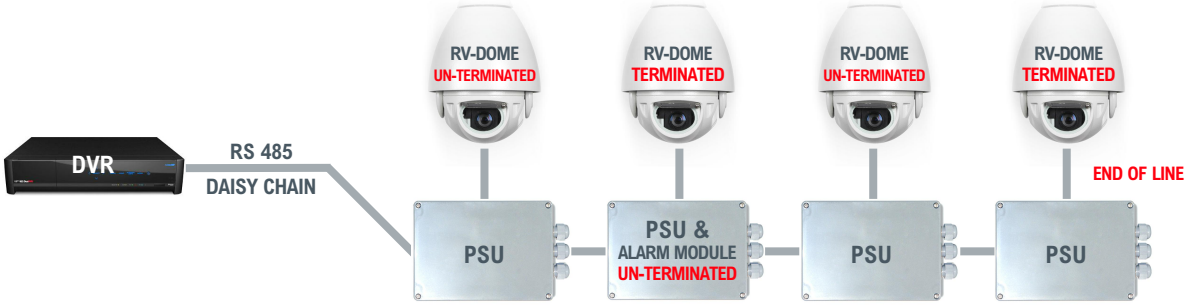
If control is over RS485 and the system is running a Star Card configuration, both the Camera and Alarm Module should be terminated.



If control is over RS485 and the system is running a Daisy Chain configuration then;
(A) *If the Camera and Alarm Module is the last in line, both the Camera and Alarm Module should be terminated.*



(B) *) If the Camera and Alarm Module is NOT the last in line, the Camera should be terminated and the Alarm Module un-Terminated. The Alarm Module takes over the termination from the Camera i.e. it (the Alarm Module) should be un-terminated!*



4.6 SETTING ALARM MODULE PROTOCOL

From the 8 way DIP switch (see 'D' in FIG 9, page 8) set the alarm module protocol. Set DIP switches 1,2,3, & 4 as per the table below required protocols. '1' = on (up) & '0' = off (down).

TABLE 13

	PROTOCOL				BAUD		NO/NC	RS485 TERM
DIP SWITCH NO.	1	2	3	4	5	6	7	8
BBV UP THE COAX	0	0	0	0				
PELCO P	0	1	0	0				
PELCO D	1	1	0	0				

TECH SUPPORT COMMENT: **Alarm module protocol should be set to the same protocol as the Camera (1.3)**
Pelco D normally uses 2400 baud. Pelco P normally uses 4800 baud.
Alarm card does not support Vista & Dennard protocols; use Pelco P or D.

4.7 SETTING ALARM MODULE BAUD RATE

Use the 8 way dip switch (see 'D' in FIG 9, page 8) to set the alarm module baud rate.
Set the DIP switches 5 & 6 as per the table below to select the required baud rate '0' = OFF (down) and '1'= ON (up).
The default setting is 9600 baud (both switches off)

TABLE 14

	PROTOCOL				BAUD		NO/NC	RS485 TERM
DIP SWITCH NO.	1	2	3	4	5	6	7	8
2400					1	0		
4800					0	1		
9600					0	0		
19200					1	1		

CAUTION: **The Alarm module baud rate should be set to be the same as the Camera baud rate (2.4)**

5 WIRELESS ALARM CARD (WIRELESS PIR DETECTOR)

WARRANTY & SAFETY NOTICE: DISCONNECT ALL POWER BEFORE OPENING OR WORKING ON THE POWER SUPPLY UNIT AND ALARM CARD. ALARM CARDS SHOULD NOT BE HOT SWAPPED OR INSTALLED WHILST THE POWER IS LIVE. INSTALLATION MUST BE CARRIED OUT BY A SUITABLY QUALIFIED PERSON.

5.1 FACTORY FITTED WIRELESS CARD (RV-PSU-ALM16-W)

The Redvision Wireless Card is compatible with the Redvision Wireless PIR, Luminite Genesis Range and the Redwall Wireless Transmitter Module Part Code WF434T, which wireless enables the Redwall PIRs.

If the POWER SUPPLY (RV-PSU) has a factory fitted wireless alarm card (RV-PSU-ALM16-W) it will be necessary to configure the wireless alarm card's 8 WAY DIP SWITCH SETTING see FIG 10 below.

- 1 to 3 dip switches are not used & should be left 'ON' (UP)
- Switches 4 to 8 (Dome Head Site Code) provide up to 32 (1 to 16 shown in TABLE 15 below) channels of wireless transmission to enable alarm activation.
- The transmission needs to be matched between the Dome Head Site Code on the wireless receiver & the Site Code within the PIR detector (see separate PIR installation guide supplied with the PIR).
- One or more domes wil respond to any wireless PIR within range providing the Dome Head Site Code & corresponding PIR Site Code match.

FIG 10

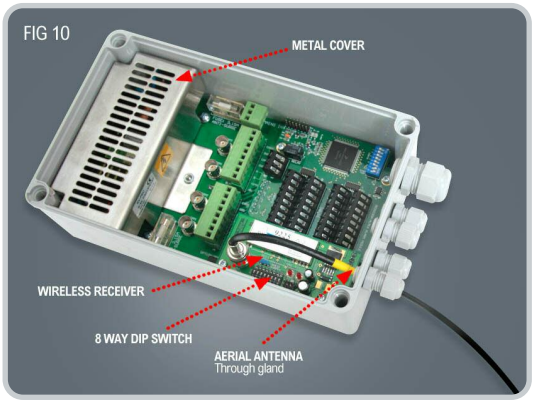


TABLE 15

SW1 — NOT USED (1 2 3)

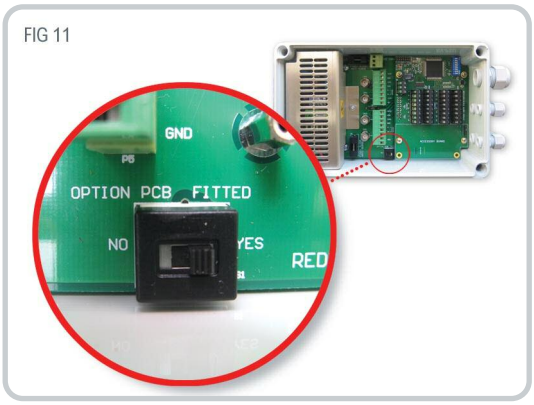
	4	5	6	7	8
1	▲	▲	▲	▲	▲
2	▲	▲	▲	▲	▼
3	▲	▲	▲	▼	▲
4	▲	▲	▲	▼	▼
5	▲	▲	▼	▲	▲
6	▲	▲	▼	▲	▼
7	▲	▲	▼	▼	▲
8	▲	▲	▼	▼	▼
9	▲	▼	▲	▲	▲
10	▲	▼	▲	▲	▼
11	▲	▼	▲	▼	▲
12	▲	▼	▲	▼	▼
13	▲	▼	▼	▲	▲
14	▲	▼	▼	▲	▼
15	▲	▼	▼	▼	▲
16	▲	▼	▼	▼	▼

UP = ▲
DOWN = ▼

5.2 SLIDE SWITCH

CAUTION: **Ensure the slide switch located on the power supply PCB is set to 'YES'. See FIG 11 below**

FIG 11



5.2.1 POSITIONING OF RV-PSU-ALM16-W

To maximise the transmission range install the PSU externally with the aerial pointing through the gland towards the ground. An optional booster aerial (RV-AE434) can be used to significantly improve signal and range. It is recommended to use the booster aerial if the PIRs are installed on metal clad buildings.

5.3 IF RETRO FITTING WIRELESS ALARM RECEIVER

If retro-fitting a wireless alarm receiver card onto an existing 16 way alarm module (RV-ALM16) observe the following steps:

HAS PSU ALREADY GOT A 16 WAY ALARM MODULE INSTALLED?

If NO: See steps 4.1 to 4.5 previous.
If YES: Follow steps (A) to (F) below.

A) ISOLATE POWER FROM PSU you cannot hot swap alarm card.
B) Remove two off M3 fixings from Alarm PCB within highlighted 'OPTION PCB' outline.
C) Replace with two M3 threaded pillars supplied with wireless alarm receiver card.
D) Align alarm module with P3 connector and secure with M3 fixings.
E) Thread aerial antenna through gland and connect to BNC on wireless receiver.
F) See above 5.1 FIG 13 for DIP switch settings.

6 NAVIGATING THE MENUS

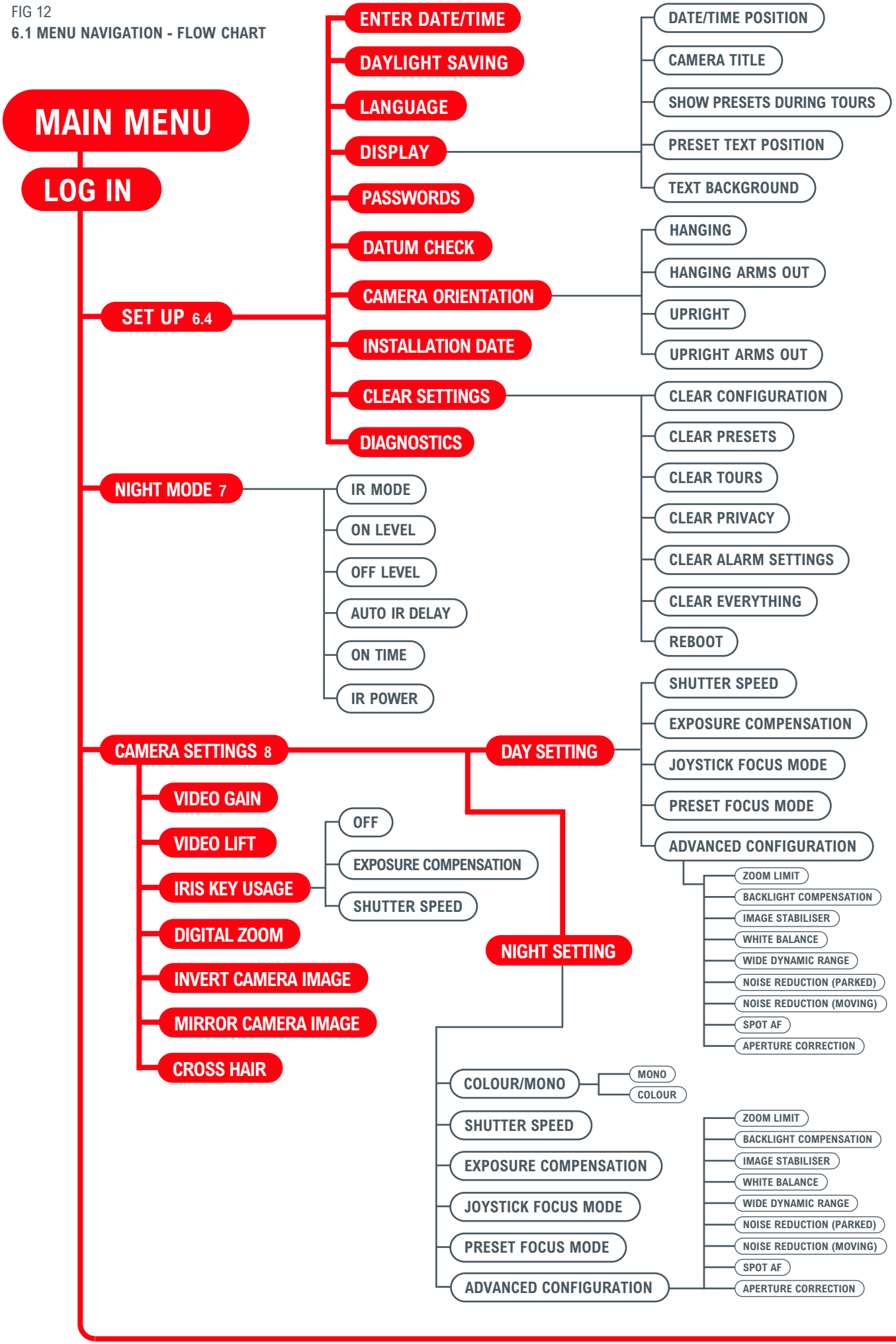
6.1 MENU NAVIGATION - FLOW CHART

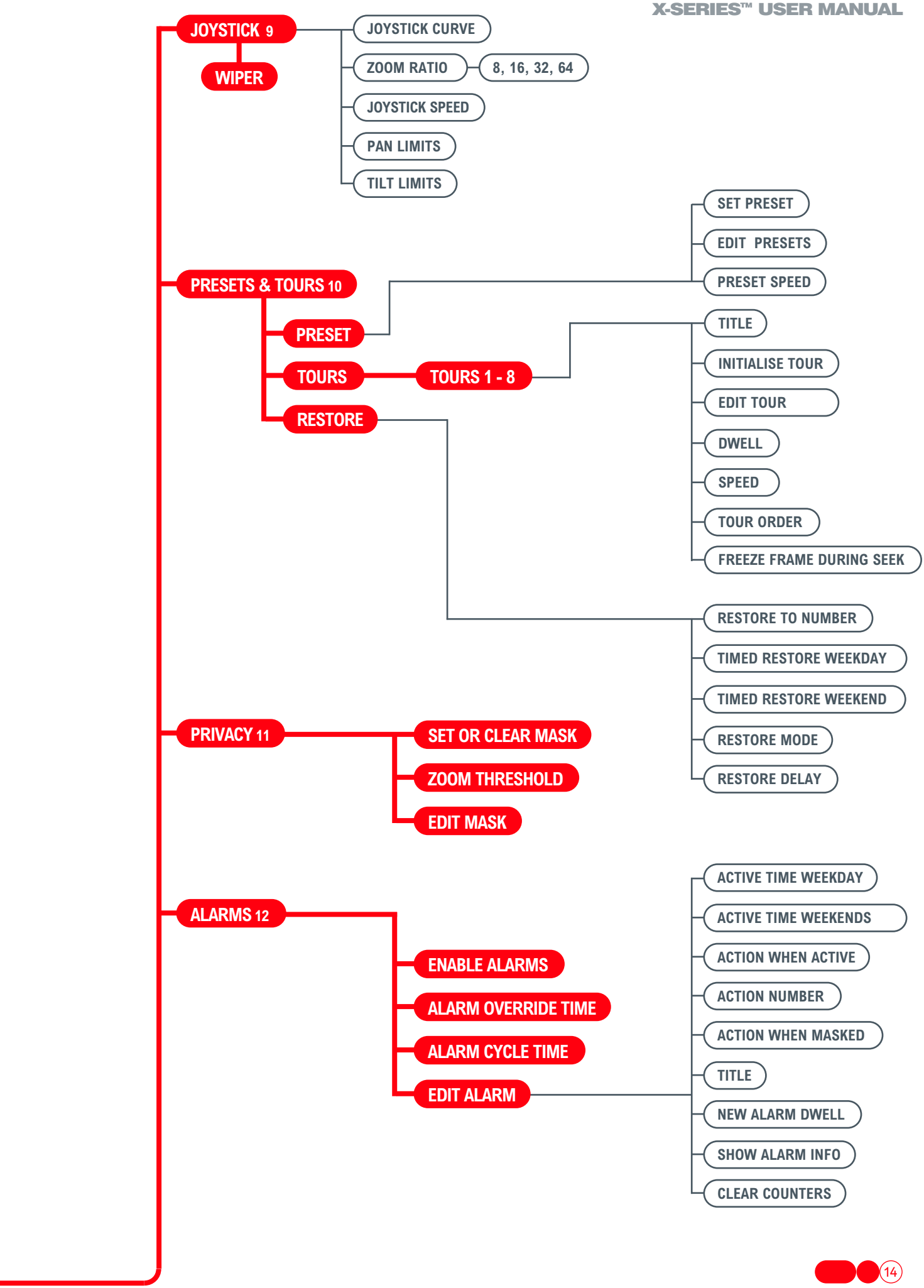
Use joystick/Arrow keys to navigate the menu options. See FIG 12, page 13.

6.1.1 ACCESS MAIN MENU FROM 3rd PARTY CONTROLLERS

As most keyboards differ in the way they access the Camera's MAIN menu it is recommended the user refers to the specific keyboard manual for the control system they are using. See FIG 12, page 8 for examples.

FIG 12
6.1 MENU NAVIGATION - FLOW CHART




JOYSTICK 9
WIPER
JOYSTICK CURVE
ZOOM RATIO
8, 16, 32, 64
JOYSTICK SPEED
PAN LIMITS
TILT LIMITS
PRESETS & TOURS 10
PRESET
TOURS
TOURS 1 - 8
RESTORE
SET PRESET
EDIT PRESETS
PRESET SPEED
TITLE
INITIALISE TOUR
EDIT TOUR
DWELL
SPEED
TOUR ORDER
FREEZE FRAME DURING SEEK
RESTORE TO NUMBER
TIMED RESTORE WEEKDAY
TIMED RESTORE WEEKEND
RESTORE MODE
RESTORE DELAY
PRIVACY 11
SET OR CLEAR MASK
ZOOM THRESHOLD
EDIT MASK
ALARMS 12
ENABLE ALARMS
ALARM OVERRIDE TIME
ALARM CYCLE TIME
EDIT ALARM
ACTIVE TIME WEEKDAY
ACTIVE TIME WEEKENDS
ACTION WHEN ACTIVE
ACTION NUMBER
ACTION WHEN MASKED
TITLE
NEW ALARM DWELL
SHOW ALARM INFO
CLEAR COUNTERS

Some common examples for accessing the Camera main menu and commands are as follows:

TABLE 16

CONTROLLER	ACCESS MAIN CAMERA MENU	ENTER COMMAND	SET A PRESET
BBV	Press & hold # then press 1	Press 1	Press & hold program key then press number preset to be saved
TX400	Press & hold # then press 1	Press 1	press & hold set then preset number
BBV 1000	Press hold # then press wash key	Press and hold preset key then press 1	Press & hold PROGRAM to call up menu, press key 1 followed by preset key
DTX 1000	Press & hold # then wash key	Press and hold preset key then press 1	Press & hold set to call up menu press key 1 followed by preset number
PELCO KBD300	Enter 95 then press & hold preset key	Enter 95 then press preset key	Hold preset key then press preset number
VICON	Arrow keys to scroll to preset 95	Press 1 enter	

6.1.2 EXIT MENU

Move the joystick or arrow keys to the left from all levels to exit the Camera main menu.
Any changes made will be saved permanently when the menu is exited. The message 'SAVED OK' will appear to confirm changes have been saved.

6.2 LOGIN

Use joystick/Arrow keys to navigate the menu options.

- ➔ From main menu move joystick/arrow ▸ TO LOGIN MENU
- ➔ MOVE ◂▸▴▾ ENTER DIGIT PASSWORD
- ➔ MOVE ◂ TO SAVE & EXIT

A message will display to confirm successful login or not.

Default PASSWORDS

TECHNICIAN	999900 (Full access)
SUPERVISOR	555500 (partial access)
OPERATOR	111100 (limited access)

To change a password see 6.4.5.4 & view permissions rights see 6.4.5

6.3 LOGIN EXPIRY

After 5 minutes of user inactivity the system times out and the Camera reverts to its previous activity. Access to the menu will be denied unless password is re-entered.

6.4 SET UP

The 'SET UP' is the main sub menu for accessing Camera configuration settings. See 6.4.1 to 6.4.10

Login > main menu > set up

6.4.1 ENTER DATE & TIME

- ➔ LOGIN > MAIN MENU > SETUP > **ENTER DATE/TIME**
- ➔ MOVE ◂▸▴▾ TO SET DATE DD:MM:YY & TIME HH:MM:SS
- ➔ MOVE ◂ TO SAVE & EXIT

6.4.2 DAYLIGHT SAVING

Default setting is AUTO.

- ➔ LOGIN > MAIN MENU > SETUP > **DAYLIGHT SAVING**
- ➔ MOVE ◀▶▲▼ TO SET Auto, OFF (+0), ON (+1)
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.3 LANGUAGE OPTIONS

Localise the display messages into the following language options:

- English
- Spanish
- German
- French
- Portuguese

- ➔ LOGIN USING TECHNICIAN PASSCODE > MAIN MENU > **LANGUAGES**
- ➔ MOVE ▲▼ TO CHANGE LANGUAGE
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.4 DISPLAY

6.4.4.1 DATE/TIME POSITION

User has the option of inserting the on screen position of the date/time

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> DATE & TIME POSITION**
- ➔ MOVE ▲▼ TO MOVE THE DISPLAY POSITION
- ➔ MOVE ◀ TO SAVE & EXIT

Default is OFF (nothing displayed).

6.4.4.2 CAMERA TITLE

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> CAMERA TITLE > TITLE**
- ➔ MOVE ▲▼ TO CHANGE ALPHANUMERIC CHARACTERS
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.4.3 CAMERA TITLE SCREEN POSTION

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> CAMERA TITLE > POSITION ON SCREEN**
- ➔ MOVE ▲▼ TO MOVE SCREEN POSITION
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.4.4 SHOW PRESET TITLES DURING TOURS

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> SHOW PRESET TITLE DURING TOURS**
- ➔ MOVE ▲▼ SELECT YES/NO
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.4.5 PRESET TEXT POSITION

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> SHOW PRESET TEXT POSITION**
- ➔ MOVE ▲▼ TO CHANGE POSITION
- ➔ MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **It is important users do not set everything to the same corner of the screen**

6.4.4.6 TEXT BACKGROUND

- ➔ LOGIN > MAIN MENU > SETUP > DISPLAY **> TEXT BACKGROUND**
- ➔ MOVE ▲▼ SELECT TO CHANGE TEXT BACKGROUND
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.5 PASSWORDS

- ➔ LOGIN > MAIN MENU > SETUP **> PASSWORDS**

6.4.5.1 OPERATOR (LIMITED ACCESS)
Default password is 111100. TO CHANGE see 6.4.5.4
Permission rights:

- Date/time
- Daylight saving
- Presets
- Tours
- Display options
- Language options
- Datum check

6.4.5.2 SUPERVISOR (PARTIAL ACCESS)
Default password is 555500. TO CHANGE see 6.4.5.4
Permission rights: All operator permissions plus:

- Clear privacy
- Set privacy
- Alarms

6.4.5.3 TECHNICIAN (FULL ACCESS)
Default password is 999900. TO CHANGE see 6.4.5.4
Permission rights: All operator & supervisor permissions plus:

- Camera titles
- Set passwords
- Installation date
- Clear settings
- Reboot
- Diagnostics
- IR modes
- Camera settings
- Joystick settings
- Wiper settings

6.4.5.4 TO CHANGE PASSWORD

- ➔ LOGIN > MAIN MENU > SETUP > **PASSWORDS**
- ➔ LOGIN USING TECHNICIAN PASSCODE
- ➔ MOVE ◀▶▲▼ TO SELECT LEVEL TO BE CHANGED
- ➔ MOVE ◀▶▲▼ TO CHANGE PASSWORD NUMBER
- ➔ MOVE ◀ TO SAVE & EXIT

6.4.6 DATUM CHECK
The Redvision X-Series Camera is programmed to perform a datum check every 24 hours. The Camera will pan and tilt for a few seconds while it undergoes a self diagnostic test and re-checks its alignment. When the process is complete the Camera will revert to its previous activity including any tours with presets.

TECH SUPPORT COMMENT: **It is recommended to leave the Camera in the default 24 hour option**

6.4.7 CAMERA ORIENTATION

- LOGIN > MAIN MENU > SETUP > **CAMERA ORIENTATION**
- MOVE ▲▼ TO SELECT CAMERA ORIENTATION > HANGING, HANGING ARMS OUT, UPRIGHT, UPRIGHT ARMS OUT
- MOVE ◀ TO SAVE & EXIT

The Camera orientation automatically sets the maximum tilt up/down positions depending on whether the Camera is in upright or hanging down mode. The maximum tilt restrictions can be deactivated to allow full tilt movement. See 9.6.

6.4.8 DATE AND TIME OF INSTALLATION

- LOGIN > MAIN MENU > SETUP > **INSTALLATION DATE**
- MOVE ◀▶▲▼ TO ENTER INSTALLATION DATE/TIME
- MOVE ◀ TO SAVE & EXIT

6.4.9 CLEAR SETTINGS

6.4.9.1 CLEAR CONFIGURATION

Use this option to partially clear configuration settings. All configuration changes except for tours and presets will be reset to factory default.

- LOGIN > MAIN MENU > SETUP > **CLEAR SETTINGS > CLEAR CONFIGURATION**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.2 CLEAR PRESETS

Use this option to clear ALL stored presets.

- LOGIN > MAIN MENU > SETUP > **CLEAR SETTINGS > CLEAR PRESETS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.3 CLEAR TOURS

Use this option to clear ALL stored tours.

- LOGIN > MAIN MENU > SETUP > **CLEAR SETTINGS > CLEAR TOURS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.4 CLEAR PRIVACY MASKS

Use this option to clear ALL privacy masks.

- LOGIN > MAIN MENU > SETUP > **CLEAR SETTINGS > CLEAR PRIVACY MASKS**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.5 CLEAR EVERYTHING

This option to clears ALL settings but does not reboot the Camera therefore leaving video picture.

- LOGIN > MAIN MENU > SETUP > **CLEAR EVERYTHING**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.9.6 REBOOT

To soft restart the Camera (equivalent to power cycling).

- LOGIN > MAIN MENU > SETUP > **CLEAR SETTINGS > REBOOT**
- MOVE ▲▼ TO SELECT YES/NO
- MOVE ◀ TO SAVE & EXIT

6.4.10 DIAGNOSTICS

There are five diagnostic screens which display useful information for the technician and remote help diagnostics for Redvision's technical support helpdesk. They are not configurable.

To access the diagnostic screens.

- ➔ LOGIN > MAIN MENU > SETUP > **DIAGNOSTICS**
- ➔ MOVE ▲▼ TO SELECT SYSTEM, STATUS, CAMERA, TELEMETRY OR MOTORS
- ➔ MOVE ◀ TO SAVE & EXIT

To 'exit' motors, it is necessary to 'recall' the menu see 6.1.1

7 NIGHT MODE

7.1 IR MODE

Default Night Mode is when the Camera's infra-red pods (RVX-IR models) are on and/or the Camera is in mono. The option exists for the camera to be forced to stay in colour. See 8.2.1.

Manual	➔	IR pods turn on & Camera switches to mono manually (all models).
Timed	➔	IR pods turn on & Camera switches to mono at programmed times (all models).
Light sensing	➔	IR pods turn on & Camera switches to mono when it gets dark (all models).

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > IR MODE**
- ➔ MOVE ▲▼ TO SELECT MANUAL/TIMED/LIGHT SENSING
- ➔ MOVE ◀ TO SAVE & EXIT

7.2 ON LEVEL

Light level at which the IR pods turn on (RVX-IR models) and/or the camera switches to mono (ALL RVX models). Default setting is 55 must be lower than OFF level. The lower the number the darker the light needs to be in order for the camera to switch to mono and IR pods turn on .

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > ON LEVEL**
- ➔ MOVE ▲▼ CHANGE VALUE
- ➔ MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: ***The numerical value is an arbitrary figure and not a lux measurement.**

7.3 OFF LEVEL

Light level at which the IR pods turn OFF (RVX-IR version) and the camera switches to mono. Default setting is 55 must be higher than ON level.

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > OFF LEVEL**
- ➔ MOVE ▲▼ CHANGE VALUE
- ➔ MOVE ◀ TO SAVE & EXIT

7.4 AUTO IR DELAY

The auto IR delay time can be set in seconds. The delay prevents the IR pods & Camera responding to short term effects e.g. car headlights, which may cause the IR pods & Camera to switch to mono. Default is 60 seconds.

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > AUTO IR DELAY**
- ➔ MOVE ▲▼ CHANGE VALUE (1 - 999 seconds)
- ➔ MOVE ◀ TO SAVE & EXIT

7.5 ON TIMES

The IR PODS (RVX-IR version) & Camera can be programmed to switch on/off colour/mono at pre-determined times. There are 24 block positions representing each hour of the day.

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > IR ON TIMES**
- ➔ MOVE ▲▼ TO SELECT HOUR TIME BLOCKS
- ➔ MOVE ◀ TO SAVE & EXIT

Solid block = Infra red ON
No Block = Infra red OFF

7.6 INFRA RED POWER (RVX-IR VERSION ONLY)

The infra-red intensity can be varied. Default is set to 100%.

- ➔ LOGIN > MAIN MENU > **NIGHT MODE > IR POWER**
- ➔ MOVE ▲▼ CHANGE VALUE
- ➔ MOVE ◀ TO SAVE & EXIT

8 CAMERA SETTINGS

Use CAMERA SETTINGS to optimise the Sony Camera module performance for specific conditions. There are two modes:

1. Day Settings - IR PODS OFF (RVX-IR version) Camera in daylight colour mode (all versions).
2. Night Settings - IR PODS ON (RVX-IR version) Camera in mono (all versions).

8.1 DAY SETTINGS

8.1.1 SHUTTER SPEED

Adjust the shutter speed to achieve greater light sensitivity. Default is 1/215

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > SHUTTER SPEED**
- ➔ MOVE ▲▼ TO CHANGE SHUTTER SPEED 1/12 to AUTO
- ➔ MOVE ◀ TO SAVE & EXIT

8.1.2 EXPOSURE COMPENSATION

Adjustment for unusual lighting distribution. Compensation can be either positive (additional exposure) or negative (reduced exposure). Default setting = 0

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > EXPOSURE COMPENSATION**
- ➔ MOVE ▲▼ TO ADJUST EXPOSURE LEVEL BETWEEN +7 AND -7
- ➔ MOVE ◀ TO SAVE & EXIT

8.1.3 JOYSTICK FOCUS MODE

There are two settings Auto FOCUS & manual FOCUS. Default setting for day is auto.

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > JOYSTICK FOCUS MODE**
- ➔ MOVE ▲▼ TO SELECT AUTO OR MANUAL
- ➔ MOVE ◀ TO SAVE & EXIT

8.1.4 PRESET FOCUS MODE

There are two modes: auto & stored. Default setting for day is auto.

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > PRESET FOCUS MODE**
- ➔ MOVE ▲▼ TO SELECT AUTO OR STORED
- ➔ MOVE ◀ TO SAVE & EXIT

8.1.5. ADVANCED CONFIGURATION

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADVANCED CONFIGURATION**

8.1.5.1 ZOOM LIMIT

This can be adjusted from 10% to 100%

- ➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ZOOM LIMIT**
- ➔ MOVE ▲▼ TO CHANGE ZOOM LIMIT (10% to 100%)
- ➔ MOVE ◀ TO SAVE & EXIT

8.1.5.2 BACKLIGHT COMPENSATION

The ability of a Camera to compensate in cases where a subject with a large amount of background light would otherwise be obscured by blooming or silhouetting. Can be turned ON or OFF. Default is off.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > BACKLIGHT COMPENSATION**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.3 IMAGE STABILISER

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > IMAGE STABILISER**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.4 WHITE BALANCE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > WHITE BALANCE**
- MOVE ▲▼ TO SELECT OUTDOOR AUTO/ATW/OUTDOOR/INDOOR/AUTO/SODIUM LAMP/SODIUM LAMP AUTO
- MOVE ◀ TO SAVE & EXIT

8.1.5.5 WIDE DYNAMIC RANGE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > WIDE DYNAMIC RANGE**
- MOVE ▲▼ TO SELECT OFF/AUTO/ON
- MOVE ◀ TO SAVE & EXIT

8.1.5.6 NOISE REDUCTION (PARKED)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > NOISE REDUCTION (PARKED)**
- MOVE ▲▼ TO ADJUST 0 to 5 (2 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.1.5.7 NOISE REDUCTION (MOVING)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > NOISE REDUCTION (MOVING)**
- MOVE ▲▼ To ADJUST 0 to 5 (2 is DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.1.5.8 SPOT AE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > SPOT AE**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.1.5.9 APERTURE CORRECTION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > DAY SETTINGS > ADV CONFIG > APERTURE CORRECTION**
- MOVE ▲▼ TO SELECT 1 to 16 (9 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.2 NIGHT SETTINGS

The following settings apply when the IR pods are switched on (RVX-IR models) and the Camera is in mono (all models).

8.2.1 COLOUR/MONO

The camera default NIGHT setting is mono (black & white). The camera switches to mono when the light falls below a certain level (see 7.2 ON LEVEL). When the camera switches to mono the infra-red PODs automatically turn on (IR models only). However, the camera can be 'forced' to stay in colour within the NIGHT SETTINGS. For this option select 'COLOUR'.

> ***TECH SUPPORT COMMENT:*** **Menu Night settings will be applied regardless of whether the camera is set to switch to MONO or stay in colour.**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > COLOUR/MONO**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL change to TO SELECT COLOUR OR MONO
- MOVE ◀ TO SAVE & EXIT

8.2.2 SHUTTER SPEED

The shutter speed can be slowed down to increase light sensitivity. Default setting = 1/25.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > SHUTTER SPEED**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL should read TO CHANGE SHUTTER SPEED 1/12 to AUTO
- MOVE ◀ TO SAVE & EXIT

8.2.3 EXPOSURE COMPENSATION

Adjustment for unusual lighting distribution. Compensation can be either positive (additional exposure) or negative (reduced exposure). Default setting = 0.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > EXPOSURE COMPENSATION**
- MOVE ▲▼ TO ADJUST EXPOSURE LEVEL BETWEEN +7 AND -7
- MOVE ◀ TO SAVE & EXIT

8.2.4 JOYSTICK FOCUS MODE

There are two settings Auto FOCUS & manual FOCUS. Default setting for day is auto

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > JOYSTICK FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL
- MOVE ◀ TO SAVE & EXIT

8.2.5 PRESET FOCUS MODE

There are two modes: auto & stored. Default setting for night is stored

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > PRESET FOCUS MODE**
- MOVE ▲▼ TO SELECT AUTO OR MANUAL
- MOVE ◀ TO SAVE & EXIT

8.2.6 ADVANCED CONFIGURATION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADVANCED CONFIGURATION**

8.2.6.1 ZOOM LIMIT

This can be adjusted from 10 to 100%

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > ZOOM LIMIT**
- MOVE ▲▼ TO ADJUST ZOOM LIMIT BETWEEN 10% and 100%
- MOVE ◀ TO SAVE & EXIT

8.2.6.2 BACKLIGHT COMPENSATION

The ability of a Camera to compensate in cases where a subject with a large amount of background light would otherwise be obscured by blooming or silhouetting.

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > BACKLIGHT COMPENSATION**
- MOVE ▲ ▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.2.6.3 IMAGE STABILISER

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > IMAGE STABILISER**
- MOVE ▲ ▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

8.2.6.4 WHITE BALANCE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > WHITE BALANCE**
- MOVE ▲ ▼ TO SELECT OUTDOOR AUTO/ATW/OUTDOOR/INDOOR/AUTO/SODIUM LAMP/SODIUM LAMP AUTO
- MOVE ◀ TO SAVE & EXIT

8.2.6.5 WIDE DYNAMIC RANGE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > WIDE DYNAMIC RANGE**
- MOVE ▲ ▼ TO SELECT OFF/AUTO/ON
- MOVE ◀ TO SAVE & EXIT

8.2.6.6 NOISE REDUCTION (PARKED)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > NOISE REDUCTION (PARKED)**
- MOVE ▲ ▼ TO ADJUST 0 to 5 (2 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.2.6.7 NOISE REDUCTION (MOVING)

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > NOISE REDUCTION (MOVING)**
- MOVE ▲ ▼ TO ADJUST 0 to 5 (2 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.2.6.8 SPOT AE

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > SPOT AE**
- MOVE ▲ ▼ TO SELECT OFF/ON (OFF IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.2.6.9 APERTURE CORRECTION

- LOGIN > MAIN MENU > **CAMERA SETTINGS > NIGHT SETTINGS > ADV CONFIG > APERTURE CORRECTION**
- MOVE ▲ ▼ TO SELECT 1 to 16 (9 IS DEFAULT)
- MOVE ◀ TO SAVE & EXIT

8.3 VIDEO GAIN

Video gain can be set from 0 to 7db to compensate for losses in long cable runs. Default setting is 2.

TECH SUPPORT COMMENT: **It is recommended to use video lift first before adding gain as this will usually give better results**

- LOGIN > MAIN MENU > **CAMERA SETTINGS > VIDEO GAIN**
- MOVE ▲ ▼ TO ADJUST from 0 - 7
- MOVE ◀ TO SAVE & EXIT

8.4 IRIS KEY USAGE

The iris key can be assigned to either:

- Adjust exposure compensation - brighten/darken image
- Shutter speed - allows integration. Can only be adjusted when Camera is in night mode (IR pods on or Camera in mono)

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > IRIS KEY USAGE**
➔ MOVE ▲▼ TO SELECT EITHER EXPOSURE COMPENSATION, SHUTTER SPEED OR OFF
➔ MOVE ◀ TO SAVE & EXIT

8.5 VIDEO LIFT

High frequency video lift can be set between 0 & 8. Default is zero.

TECH SUPPORT COMMENT: **Technician should attempt to compensate for poor cable runs using video lift, before using video gain**

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > VIDEO LIFT**
➔ MOVE ▲▼ TO ADJUST BETWEEN 0 -8
➔ MOVE ◀ TO SAVE & EXIT

8.6 DIGITAL ZOOM

Select digital zoom if user wants zoom beyond optical zoom limit. Default is off.

TECH SUPPORT COMMENT: **Picture degradation may occur at high zoom**

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > DIGITAL ZOOM**
➔ MOVE ▲▼ SELECT YES/NO
➔ MOVE ◀ TO SAVE & EXIT

8.7 INVERT CAMERA IMAGE

TECH SUPPORT COMMENT: **Technicians should set the Camera orientation first see 6.4.8 .**

'INVERT CAMERA IMAGE' function should only be used to correct for special cases once orientation has been set otherwise it should be set to NO.

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > INVERT CAMERA IMAGE**
➔ MOVE ▲▼ SELECT YES/NO
➔ MOVE ◀ TO SAVE & EXIT

8.8 MIRROR CAMERA IMAGE

This function reverses the image e.g. left to right will appear right to left.

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > MIRROR CAMERA IMAGE**
➔ MOVE ▲▼ SELECT YES/NO
➔ MOVE ◀ TO SAVE & EXIT

8.9 CROSS HAIR

➔ LOGIN > MAIN MENU > **CAMERA SETTINGS > CROSS HAIR**
➔ MOVE ▲▼ SELECT ON/OFF
➔ MOVE ◀ TO SAVE & EXIT

9 JOYSTICK & WIPER

9.1 JOYSTICK CURVE

There are three settings. The following options describe how sensitive the joystick is to small movements. Linear is most sensitive, quasi linear and non-linear allow for finer control at low speeds, ramping up with larger movements.
Quasi linear is the default.

- LOGIN > MAIN MENU > **JOYSTICK > JOYSTICK CURVE**
- MOVE ▲▼ TO SELECT QUASI LINEAR, LINEAR OR NON-LINEAR
- MOVE ◀ TO SAVE & EXIT

9.2 ZOOM RATIO

The zoom ratio affects how much the Camera slows down as you zoom in [the higher the numbers make the speed drop off more as you zoom in]. The default setting is 16.

- LOGIN > MAIN MENU > **JOYSTICK > ZOOM RATIO**
- MOVE ▲▼ 8,16,32,64
- MOVE ◀ TO SAVE & EXIT

9.3 WIPER

Applies to RVX models fitted with wiper.

- LOGIN > MAIN MENU > **JOYSTICK > WIPER**
- MOVE ▲▼ INTERMITTENT WIPE (1-99) OR WIPER TIMEOUT (1-255)
- MOVE ▲▼ TO CHANGE TIME IN SECONDS: WIPE (1-99) TIMEOUT (1-255)
- MOVE ◀ TO SAVE & EXIT

9.3.1 WIPER SHORT-CUT PRESET

If the control unit does not have a dedicated wiper key function it is possible to allocate a 'PRESET' number to activate/deactivate the wiper.

- LOGIN > MAIN MENU > **JOYSTICK > WIPER**
- WIPER SHORT-CUT PRESET > Select No PRESET/or preset number between 1-100

9.3.2 WASH SHORT-CUT PRESET (NOT AVAILABLE YET).

9.4 JOYSTICK SPEED

Default setting is 60%. Use ▲▼ to increase/decrease.

- LOGIN > MAIN MENU > **JOYSTICK > JOYSTICK SPEED**
- MOVE ▲▼ INCREASE/DECREASE SPEED SETTING
- MOVE ◀ TO SAVE & EXIT

9.5 PAN LIMITS

Program Camera to pan only within pre-defined left and right limits. This can be useful if the Camera is mounted on the corner of a building or a wall. If presets are programmed the Camera will stay within the permitted limits, and not take the shortest route .

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET PAN LIMITS**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **If re-setting LEFT & RIGHT PAN limits the technician should turn 'use limits' off to allow full movement**

9.5.1 SET RIGHT LIMIT

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET RIGHT PAN LIMIT**
- PAN THE CAMERA TO THE RIGHT MOST PAN LIMIT
- PRESS SELECT OR WAIT 10 SECS FOR AUTO SET
- MOVE ◀ TO SAVE & EXIT

9.5.2 SET LEFT LIMIT

- LOGIN > MAIN MENU > **JOYSTICK > PAN LIMIT > SET LEFT PAN LIMIT**
- PAN THE CAMERA TO THE LEFT MOST PAN LIMIT
- PRESS SELECT OR WAIT 10 SECS FOR AUTO SET
- MOVE ◀ TO SAVE & EXIT

9.6 SET TILT LIMITS

Default setting is 'on'. Limits are determined by the Camera Orientation set-up see 6.4.7

All X-Series Cameras have the following viewing 'tilt' angle:

In Dome configuration (i.e. with lid): 90º to 10º above horizon.
In Ball configuration (i.e. without lid): 90º to 60º above horizon.

Default tilt setting is 'ON'. Limits are determined by the Camera orientation setup. See 6.4.7

- LOGIN > MAIN MENU > **JOYSTICK > TILT LIMIT > SET TILT**
- MOVE ▲▼ TO SELECT ON/OFF
- MOVE ◀ TO SAVE & EXIT

10 PRESETS & TOURS

Presets and tours can be programmed using third party keyboard controllers, or from the Camera's own internal menu. To access presets & tours menu:

- LOGIN > MAIN MENU > **PRESETS & TOURS**

10.1 FOCUS SHIFT

TECH SUPPORT COMMENT: **Technicians will be familiar with setting up focus on a 'fixed' Camera by temporarily fitting the lens with a neutral density (nd) filter to compensate for focus shift when the Camera switches to mono.**

The best way to ensure optimum focus on a dome/ptz Camera is to set 'night-time' presets when the light levels are low and the Camera is in mono & the IR pods are on (RVX-IR versions only). The controller's 'focus near' focus far can be used to fine tune the focus manually before saving the preset. This way the Camera will remember an absolute preset position including the focus settings.

10.2 SET A PRESET (USING CAMERA INTERNAL MENU)

- LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > SET PRESETS**
- MOVE ▲▼ TO SELECT PRESET NUMBER TO BE SAVED (1 – 100)
- NUDGE JOYSTICK/ARROW right TO PRODUCE COSSHAIR
- USE PTZ CONTROL TO MOVE CAMERA INTO POSITION
- USE ENTER OR CANCEL TO QUIT OR WAIT 10 SECS FOR PRESET TO AUTO SET
- REPEAT STEPS 4 TO 6 TO SET MORE PRESETS
- MOVE ◀ TO SAVE & EXIT

10.3 EDIT PRESET

The default display title for a preset is P1, P2, P3 etc. To customise preset titles:

- LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > EDIT PRESETS**
- MOVE ▲▼ TO SELECT PRESET NUMBER TO BE EDITED
- USE ▶ TO INPUT TITLE OR CLEAR PRESET
- USE ▲▼ TO SELECT ALPHANUMERIC CHARACTERS
- MOVE ◀ TO SAVE & EXIT

10.4 PRESET SPEED

The speed at which the Camera moves to each preset can be programmed. Default is 60% to change the value.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > PRESETS > PRESET SPEED**
- ➔ MOVE ▲▼ TO SELECT PRESET
- ➔ MOVE ▲▼ TO CHANGE VALUE (10% TO 100%)
- ➔ MOVE ◀ TO SAVE & EXIT

10.5 TOURS

Tour 1 by default is fully populated & includes all set presets. It is possible to program up to 100 presets per tour. Once a tour is set the Camera moves between each preset within that tour automatically, and will dwell [10.6.4] for a period specified. The restore tour mode [10.7] can be activated on any tour from 1 to 8.

The tour is continually repeated unless interrupted by;

- Manual pan, tilt or zoom
- Calling up a preset position
- An alarm activation

10.6 TOUR 1 TO 8

The user can set up to 8 different tours. Tour 1 by default is fully populated & includes all set presets. These can be edited if required. All other tours are empty.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS**
- ➔ TOUR
- ➔ MOVE ▲▼ TO SELECT A TOUR NUMBER 1 - 8
- ➔ MOVE ▲▼ TO CHANGE VALUE
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.1 TOUR TITLE (HOW TO PROGRAM)

Each tour can be assigned its own title. The default title is t1, t2, t3 etc.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > TOUR TITLES TOUR**
- ➔ MOVE ▶ TO INPUT TITLE
- ➔ MOVE ▲▼ TO SELECT A TOUR NUMBER TO BE NAMED
- ➔ MOVE ▲▼ TO SELECT ALPHANUMERIC CHARACTERS
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.2 HOW TO INITIALISE A TOUR

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > INITIALISE TOUR**
- ➔ MOVE ▲▼ TO SELECT EITHER CANCEL (DOES NOTHING & LEAVES TOUR IN TACT), CLEAR (REMOVES PRESETS FROM TOUR) OR SET (POPULATES THE TOUR WITH ALL SET PRESETS IN ORDER)
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.3 EDIT TOUR

Allows operator to edit the standard tour sequence e.g. preset 1,2,3,

The default setting is position 1 of the tour = preset 1, and, position 2 = preset 2 etc.

The tour can be edited so that position 1 could = preset 2 for example. any positions set to 'NO preset' will be ignored when the tour is running.

TECH SUPPORT COMMENT: **Note that any positions set to empty presets will be skipped**

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > EDIT TOUR**
- ➔ MOVE ▲▼ TO SELECT TOUR TO BE EDITED
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.4 TOUR DWELL TIME

The time the Camera dwells between each preset can be programmed between 1 & 120 seconds. Default is 8 seconds.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > DWELL**
- ➔ MOVE ▲▼ TO SELECT DWELL TIME IN SECONDS
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.5 SPEED

The speed at which the Camera moves to each preset. Programmed in seconds.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > SPEED**
- ➔ MOVE ▲▼ TO SELECT SPEED IN SECONDS
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.6 TOUR ORDER

The speed at which the Camera moves to each preset. Programmed in seconds.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > TOUR ORDER**
- ➔ MOVE ▲▼ TO SELECT STANDARD (1,2,3)/PING-PONG (1,2,3,- 3,2,1) /RANDOM
- ➔ MOVE ◀ TO SAVE & EXIT

10.6.7 FREEZE FRAME DURING SEEK

Freezes the last preset image until Camera moves to next preset image.

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > TOURS > FREEZE FRAME**
- ➔ MOVE ▲▼ TO SELECT FREEZE FRAME
- ➔ MOVE ◀ TO SAVE & EXIT

10.7 RESTORE (PRESETS & TOURS)

10.7.1 RESTORE TO NUMBER - EITHER TOUR NUMBER OR PRESET NUMBER

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > RESTORE TO NUMBER**
- ➔ MOVE ▲▼ TO SELECT NUMBER
  (1 TO 100 IF ASSIGNING PRESET NUMBER)
  (1 TO 8 IF ASSIGNING TOUR NUMBER)
- ➔ MOVE ◀ TO SAVE & EXIT

10.7.2 TIMED RESTORE WEEKDAY

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > TIMED RESTORE WEEKDAY**
- ➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
- ➔ MOVE ▲▼ TO SELECT ENABLE (1) DISABLE (-)
- ➔ MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Monday through Friday.

10.7.3 TIMED RESTORE WEEKEND

- ➔ LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > TIMED RESTORE WEEKEND**
- ➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
- ➔ MOVE ▲▼ TO SELECT ENABLE (1) DISABLE (-)
- ➔ MOVE ◀ TO SAVE & EXIT

*Note: This is a global setting for Saturday & Sunday.

10.7.4 RESTORE MODE (PRESETS & TOURS)

Use this option to make the Camera revert to a tour or preset after a specified delay period (in seconds) of inactivity (see RESTORE DELAY 10.7.5). Restore modes:

- LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE > RESTORE MODE**
- MOVE ▲▼ TO SELECT: OFF, FIXED TOUR, FIXED PRESET, TIMED TOUR, TIMED PRESET
- MOVE ◀ TO SAVE & EXIT

TECH SUPPORT COMMENT: **Can also use 'timed restore weekday/weekend' to restore. To restore to a different tour at different times see 12.4**

10.7.5 RESTORE DELAY (PRESETS & TOURS)

Time taken before presets or tours are restored. Select between 180 seconds & off.

- LOGIN > MAIN MENU > **PRESETS & TOURS > RESTORE DELAY**
- MOVE ▲▼ TO SELECT 'OFF'or CHANGE VALUE IN SECONDS (5 - 180)
- MOVE ◀ TO SAVE & EXIT

11 PRIVACY ZONES

Up to 24 concurrent privacy zones can be programmed.

TECH SUPPORT COMMENT: **Recommended privacy patch should be set 50% larger than object being masked**

11.1 SET/CLEAR MASK

- LOGIN > MAIN MENU > **PRIVACY > SET/CLEAR MASK**
- MOVE ▲▼ TO SELECT A MASK NUMBER 1 TO 24
- MOVE ▶ TO REVEAL CROSS HAIRS
- MOVE CAMERA TO REQUIRED VIEW USING PTZ CONTROLS
- SELECT ENTER COMMAND FROM CONTROL OR WAIT 15 SECS UNTIL RED PATCH APPEARS
- MOVE ▲▼ TO SCROLL TO NEXT MASK NUMBER
- REPEAT STEPS 3 TO 5 TO CREATE NEW PRIVACY MASKS
- MOVE ◀ TO SAVE & EXIT

11.2 ZOOM THRESHOLD

- LOGIN > MAIN MENU > **PRIVACY > ZOOM THRESHOLD**
- MOVE ▲▼ 0 - 100%

11.3 EDIT MASK

- LOGIN > MAIN MENU > **PRIVACY > EDIT MASK**
- MOVE ▲▼ TO SELECT A MASK NUMBER 1 TO 24 TO BE EDITED
- CLEAR MASK ▲▼ YES/NO

12 ALARM HANDLING IN MENU SOFTWARE

The alarms can be mapped to any preset or tour, or to just put a message on the screen.

Within the Alarm Edit menu (12.4) use ▲▼ to select alarm number; within each alarm you can set type of action, dwell, and time-based masking for weekdays(12.4.1) & weekends (12.4.2).

The time-based masking is SECONDARY to the "Enable alarms" menu (12.1). If the alarm is not enabled, it will be completely ignored.

If an alarm is enabled, but masked, the user can then decide to set it to be "silent" or "message only" [12.4.3].

Title [12.4.6] is the title or name of the alarm (just like giving a preset or tour a title), this will be displayed on screen when the alarm activates.

ALARM ACTIONS:
* "Go to preset" will go to preset *if set* and dwell on it for <dwell> seconds. Otherwise it will just display alarm title (if set) or alarm number (if not) on screen for <dwell> before moving on.

* "Go to tour" will invoke the selected tour (if set) for <dwell> seconds. Otherwise it will just display alarm title (if set) alarm number (if not) on screen for <dwell> before moving on.

It is down to the user to ensure that the alarm dwell time gives sufficient time to run the tour, or as much of the tour as they require.

* "Message only" will display alarm title (if set) / number (if not) on screen for <dwell> seconds before moving on.

*Silent will do nothing and move on instantly.

When all alarms are cleared (12.4.9), the Camera will be pointing at wherever the last preset was, or running the last tour. This will continue until either the user moves the Camera, or the restore option (10.9)(if set) kicks in.

12.1 ENABLE /DISABLE ALARMS

Alarms need to be 'enabled' in order to function correctly. This feature can also be used to disable nuisance alarms caused by faulty alarm input devices such as PIRs. The alarm default setting is 'all' alarms enabled [block].

- ➔ LOGIN > MAIN MENU > **ALARMS>ENABLE ALARMS**
- ➔ MOVE ◀ ▶ TO SELECT ALARM NUMBER 1 TO 16
- ➔ MOVE ▲▼ TO ENABLE(BLOCK) /DISABLE (CLEAR)
- ➔ MOVE ◀ TO SAVE & EXIT

12.2 ALARM OVER-RIDE

On alarm activation the Camera automatically switches to the preset view of the most current alarm. The alarm overide is the time the Camera will wait before over-riding the operator's joystick commands and moving to alarm action. The over-ride time can be set to between 1 and 20 seconds. default is 10 seconds.

- ➔ LOGIN > MAIN MENU > **ALARMS > ALARM OVERIDE TIME**
- ➔ MOVE ▲▼ TO CHANGE VALUE 1 -20 SECS
- ➔ MOVE ◀ TO SAVE & EXIT

12.3 ALARM CYCLE TIME

The alarm cycle time programmed in seconds is the time it takes to tour the presets of still active alarms. Default is 3 seconds. This function will be ignored if alarms are connected directly to third party control equipment rather than the Redvision Alarm Module (RV-PSU-ALM16) & (RV-PSU-ALM16-W)

- ➔ LOGIN > MAIN MENU > **ALARMS > NEW ALARM CYCLE TIME**
- ➔ MOVE ▲▼ TO CHANGE VALUE 1 -20 SECS
- ➔ MOVE ◀ TO SAVE & EXIT

12.4 EDIT ALARMS

Use this menu to program how alarms are configured e.g. Create a weekday time schedule when alarms are automatically enabled or disabled and the type of action required when an alarm is enabled & subsequently activated etc. Alarm dwell (12.4.7) time can also be programmed in the menu.

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 >**

12.4.1 ACTIVE TIME WEEKDAYS

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTIVE TIME WEEKDAYS**
➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
➔ MOVE ▲▼ TO SELECT ENABLE(SOLID) DISABLE (CLEAR)
➔ MOVE ◀ TO SAVE & EXIT

Note: This is a global setting for monday through friday.

12.4.2 ACTIVE TIME WEEKENDS

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTIVE TIME WEEKEND**
➔ MOVE ◀ ▶ TO SELECT HOUR TIME BLOCKS*
➔ MOVE ▲▼ TO SELECT ENABLE(SOLID) DISABLE (CLEAR)
➔ MOVE ◀ TO SAVE & EXIT

Note: This is a global setting for saturday and sunday.

12.4.3 ACTION WHEN ACTIVE

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION WHEN ACTIVE**
➔ MOVE ▲▼ TO SELECT 'GO TO PRESET', MESSAGE ONLY, SILENT OR RUN TOUR
➔ MOVE ◀ TO SAVE & EXIT

12.4.4 ACTION NUMBER

TECH SUPPORT COMMENT: **The 'Action Number' is the number of the preset or tour to go depending on which option is selected**

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION NUMBER**
➔ MOVE ▲▼ TO SELECT NUMBER BETWEEN 1- 100
➔ MOVE ◀ TO SAVE & EXIT

12.4.5 ACTION WHEN MASKED

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > ACTION WHEN MASKED**
➔ MOVE ▲▼ TO SELECT 'GOTO MESSAGE ONLY OR SILENT
➔ MOVE ◀ TO SAVE & EXIT

12.4.6 TITLE

➔ LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > TITLE**
➔ MOVE ▲▼ TO SELECT ALPHNUMERIC CHARACTERS
➔ MOVE ◀ TO SAVE & EXIT

12.4.7 NEW ALARM DWELL

The Camera will move to a corresponding preset when a new alarm occurs.

On multiple alarms, presets will be called up in sequence. the dwell time (in seconds) between each alarm can be programmed. Default is 5 seconds. This function will be ignored if alarms are connected directly to third party control equipment rather than the Redvision alarm module.

TECH SUPPORT COMMENT: **See ALARM OVER-RIDE 12.2 and ALARM CYCLE TIME 12.3 - the new alarm dwell defines how long the Camera will stay on a new alarm when cycling through the active alarms list.**

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > NEW ALARM DWELL TIME**
- MOVE ▲▼ TO CHANGE VALUE BETWEEN 1 – 20 SECONDS
- MOVE ◀ TO SAVE & EXIT

12.4.8 SHOW ALARM INFO

The Camera will move to a corresponding preset when a new alarm occurs.

On multiple alarms, presets will be called up in sequence. the dwell time (in seconds) between each alarm can be programmed. Default is 5 seconds. This function will be ignored if alarms are connected directly to third party control equipment rather than the Redvision alarm Module.

TECH SUPPORT COMMENT: **Also includes number of activations which could be useful for tracking down 'chattering' alarms.**

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > SHOW ALARM INFO**
- ALARM INFO INCLUDES: ALARM NUMBER, 'ENABLED Y/N, ACTIVE Y/N, MASKED Y/N, ACTION WHEN ACTIVE, LAST ACTIVATION
- MOVE ◀ TO SAVE & EXIT

12.4.9 CLEAR COUNTERS

- LOGIN > MAIN MENU > **ALARMS > EDIT ALARMS > 1-16 > CLEAR COUNTERS**
- MOVE ▲▼ TO SELECT YES OR NO
- MOVE ◀ TO SAVE & EXIT

13 CONTACT TECHNICAL SUPPORT

Redvision Technical Support Helpline

tel: +44 (0) 1420 448 448
email: support@redvisioncctv.com
web: www.redvisioncctv.com/support

14 TECHNICAL SPECIFICATION

CAMERA

Image sensor	Sony EXview 1/4" HAD CCD (PS)		
Model	FCB-EX490E/P	FCB-EX985 E/P	FCB-EX1020/P
Optical zoom	RVX18x Optical	RVX28x Optical	RVX36x Optical
Digital zoom	12x	12x	12x
Horizontal resolution	550TVL	550TVL	550TVL
Angle of view	2.8 - 48°	2.2° – 54.2°	1.7° – 57.8°
Focal Length	4.1 to 73.8mm (F1.4 to F3)	3.5 – 91.0mm (F1.6 to F3.8)	3.5 – 91.0mm (F1.6 to F3.8)
Min illumination	0.7 1x (F1.4,50IRE)	0.25 1x(F1.35,50IRE)	1.4 1x(F1.6,50IRE)

TELEMETRY

RS485	Pelco P, Pelco D, Vista, Dennard & Bosch
Coax	BBV
Addressing	DIP switch
Baud rate	9600,4800 or 2400

MECHANICAL

Left & Right Pan Limits	Programmable
Pan & Tilt	Continuous 360 Pan (0.1-200 per second). Tilt +60° to -90° depending on set up

INFRA RED ILLUMINATION (RVX-IR version)

IR wavelength	850nm (semi covert) 940nm covert wavelength available to special order
IR range	Tested to 100m (850nm)

KEY FEATURES

Presets/Tours	100 presets with programmable titles & 8 tours with programmable titles
Password protection	Yes (three levels)
Camera titles	16 alphanumeric characters
Preset titles	16 alphanumeric characters
Privacy zones	24 programmable
Alarm handling	Weekend/weekday time schedules for enable-ing/disabling alarms
Video launch amplifier	0-6dB 8 steps
Heater	Yes
Fan	Yes

ENVIRONMENTAL & PHYSICAL

Camera head material	Die cast aluminium
Window	Flat toughened glass
Operating temperature	-35˚C to 50˚C heater/Fan
Camera head Weight	6.5 Kilos
Paint finish	Powder coat
IP Rating	IP66

WIPER (Optionally available on all models)

Intermittent or Wiper Time Out

OPTIONAL ALARM MODULE

Features	16 Alarm inputs (volt free). 1 relay o/p fits to RV-PSU. Optional wireless card up to 16 PIRs

POWER CONSUMPTION

Input	110V to 240Vac, 50MZ
Output	24V DC @ 2A output
Power Consumption	2 Amps at 48VA

MOUNTING BRACKETS

Type	Pedestal, Swan, pedestal (tower mount) wall, corner, pendant & pole clamp

This product is CE marked and has been fully tested and complies with:

- 2004/108/eec Electromagnetic Compatibility
- 73/23/eec Low Voltage Directives
- 60950:2006 Safety Standards

WARNING: THIS IS A CLASS A PRODUCT. IF INSTALLED IN A STATIC ENVIRONMENT RADIO INTERFERENCE MAY BE CAUSED IN WHICH CASE THE USER MAY BE REQUIRED TO TAKE ADEQUATE MEASURES.

15 WARRANTY INFORMATION

Redvision CCTV Limited (Redvision) warrants the buyer that the product will, on the date of shipment be free from defects in material & workmanship and will conform to Redvision's specifications provided to the buyer. If any defect in material or workmanship appears in the product, Redvision will at its option, either repair or replace the defective product without charge at Redvision's customer service centre or serviced authorised repair facility or credit or refund the purchase price of the defective product provided;

- The defect appears within 24 months from the date of purchase by the end user
- Examination of the product confirms that the claimed defect actually exists.

Buyer shall follow Redvision's instructions regarding return of the defective product and no product will be accepted for repair, replacement, credit or refund without the written authorisation of Redvision or in accordance with Redvision's written instructions. In the case of any such return the buyer shall bear the risk of loss or damage and shall prepay all transportation charges to Redvision. Repaired or replacement product will be shipped with freight prepaid by Redvision and the buyer shall bear the risk of loss or damage. The replaced product shall become Redvision's property.

In no event shall Redvision be responsible for de-installation or reinstallation of the product or for the expenses thereof. If it is determined that product is not defective, the buyer shall pay Redvision all costs of handling, inspection, repairs and transportation at Redvision's then prevailing rates.

Repairs and replacements covered by the above warranty are warranted to be free from defects as set forth above except that the defect must appear;

- Within three (3) months from the date of repair or replacement; or
- Prior to the expiration of the above twenty four (24) month period, whichever is later.

With respect to product not manufactured by Redvision, to the extent permitted, extends the warranties and affords the remedies to the buyer given to Redvision by its vendor of said products. The foregoing warranties do not extend;

- To expendable items
- To experimental or development products
- To product which has been subjected to misuse, neglect, accident or abuse;
- To the unauthorised repair or alteration by anyone other than Redvision;
- To improper installation, storage or maintenance by anyone other than Redvision;
- To product used in material violation of Redvision's instruction; or
- To product which has had its serial numbers or month and year of manufacture or shipment removed, defaced or altered or
- To software.

The term "software" means a set of logical instructions and table of information which guide the functioning of a processor. Such set may be contained in any medium whatsoever including, without limitation, hardware containing a pattern of bits representing such set, provided, however, the term "software" does not mean or include the medium.

Redvision shall charge for the repair of all product returned out of warranty.

call Redvision Customer Service **+44 (0) 1420 448 448** for an RMA number.

or visit www.redvisioncctv.com for more information.

Due to a policy of continuous product development the content of this manual may change without notice. Redvision CCTV Limited will endeavour to ensure the latest version is made available through the download section on its website www.redvisioncctv.com. Copyright © 2008 - 2011 Redvision CCTV Limited. All rights reserved. Redvision CCTV, the Redvision Logo, Redvision X-series™ RV Camera Series™, Redzone™ IR Illuminator are trademarks or registered trademarks of Redvision CCTV Limited.

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Redvision™

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